

REMARKS

The Examiner's Action mailed on January 23, 2006, has been received and its contents carefully considered. Additionally attached to this Amendment is a Request for Continued Examination, to ensure consideration of the claim changes and newly added claims.

In this Amendment, Applicant has amended claims 1 and 6, and has added claims 23-38. Various claims have been canceled. Claims 1, 6 and 31 are the independent claims, and claims 1, 6 and 31-38 are pending in the application. For at least the following reasons, it is submitted that this application is in condition for allowance.

Initially, Applicant would like to take this opportunity to thank the Examiner for conducting the telephonic interview on March 20, 2006. During this interview, Applicant was given the opportunity to propose claim changes to the Examiner which would overcome the Examiner's indefiniteness rejections, and which are believed to distinguish over the art of record. The Examiner's attention is directed to the fact that claims 1 and 6 correspond essentially to those presented within the proposed changes, but have been further modified to include the changes as discussed with the Examiner on March 20, 2006. The Examiner's attention is further directed to the fact that various ones of the claims presented within the proposed changes have not been presented with this Amendment, and new claims 31-38 were not presented to the Examiner prior to this Amendment.

The Examiner's Action has rejected claims 1-8, 16-19 and 20-21 as being indefinite. As discussed with the Examiner during the interview, and as indicated in the Interview Summary, Applicant's independent claims 1 and 6 have been amended in a manner that is believed to be responsive to this rejection. It is submitted that the claims comply with all official provisions, and it is requested that these rejections be withdrawn.

The Examiner's Action has rejected claims 1-3, 6, 9, 12-13, 15-18 and 20-22 as being anticipated by *Baba*. Applicant will treat this rejection as pertaining only to pending claims 1 and 6, as well as to the newly added claims 23-38. It is submitted that these claims are all *prima facie* patentably distinguishable over the cited reference for at least the following reasons.

Applicant's independent claim 1 is directed to a circuit board which includes, *inter alia*, an insulating substrate having at least one wiring region, with a wiring being formed on the wiring region, and with at least a portion of the wiring not being covered by the semiconductor chip. This claimed configuration has the advantages discussed in Applicant's specification, and is neither disclosed nor suggested by the cited reference.

Baba discloses a semiconductor device assembly which includes a chip 1 disposed over a printed wiring board 4. Bumps 2 of the chip 1 are attached to pads 12 disposed on the printed wiring board. The Examiner's Action has equated the pads 12 as being wirings. However, as is clear from Figure 5E, all of these so-called wirings are covered by the chip 1. Thus, this reference does not

disclose or suggest at least a portion of a wiring not being covered by a semiconductor chip, as recited by claim 1.

Moreover, dependent claims 23, 25 and 26 are submitted to be further patentably distinguishable over the cited reference for at least the following reasons. Claim 23 recites that none of the wiring is covered by a semiconductor chip. In contrast, the reference discloses that all of the wirings are covered by the semiconductor chip.

Additionally, claim 25 recites that the semiconductor chip has a terminal on an upper surface thereof, with a bonding wire extending from the terminal to the wiring to electrically connect the semiconductor chip to the wiring. In contrast, the cited reference does not disclose or suggest a terminal on an upper surface of the semiconductor chip, nor a bonding wire, as recited by this claim.

Additionally, claim 26 recites that an upper surface of the protective film is not planar over the wiring and the reinforcement layer, and is planar under the semiconductor chip. In contrast, the feature that the Examiner has equated to being a protective film appears to be planar over the wirings 12 and the reinforcement region 6. As such, it is submitted that claim 1 and the claims dependent therefrom, are *prima facie* patentably distinguishable over the cited reference.

Additionally, independent claim 6 is directed to a method of manufacturing a circuit board. This claim recites, *inter alia*, forming a protective film that covers the wirings and the reinforcement layer and which covers the semiconductor chip

region, and after the protective film is formed, mounting a semiconductor chip on the protective film and over the semiconductor chip region. In contrast, and as shown in Figures 5C and 5D of the *Baba* reference, the underfill resin 3 is injected under the chip 1, after the chip is mounted. Thus, this reference does not disclose or suggest mounting a semiconductor chip on a protective film after the protective film is formed, as recited by claim 6.

Additionally, this reference does not disclose or suggest positioning a chip so that at least a portion of the wiring is not covered by the chip, as recited by dependent claim 27. As noted above, this reference discloses that all of the wirings 12 are covered by the chip 1.

Further, this reference does not disclose or suggest that none of the wiring is covered by the semiconductor chip, as recited by claim 28. As discussed above, this reference instead teaches that all of the wirings 12 are covered by the semiconductor chip.

Moreover, claim 29 recites electrically connecting the wiring to the semiconductor chip by extending a bonding wire from a terminal on an upper surface of the chip to the wiring. In contrast, the cited reference does not disclose or suggest a terminal being on an upper surface of the semiconductor chip, nor a bonding wire, much less a bonding wire which extends from a terminal to a wiring, as recited by claim 29.

Moreover, claim 30 recites that an upper surface of the protective film is not planar over the wiring and the reinforcement layer, and is planar under the

semiconductor chip. In contrast, the cited reference discloses that the protective film is planar over the wiring and the reinforcement layer. As such, it is submitted that Applicant's independent claim 6, and the claims dependent therefrom, are *prima facie* patentably distinguishable over the cited reference.

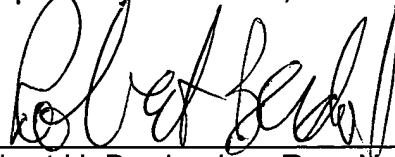
Moreover, Applicant has additionally added a new independent claim 31, which is directed to a semiconductor device. This semiconductor device includes, *inter alia*, a semiconductor chip arranged over a chip mounting region and on a protective film, and a bonding wire which connects the semiconductor chip to a wiring, with a sealing resin being provided that seals at least the bonding wire and the semiconductor chip. In contrast, the cited reference does not disclose or otherwise suggest a semiconductor chip having a bonding wire connected thereto, nor a sealing resin that seals the bonding wire and the chip, together with the other features recited within independent claim 31. As such, it is submitted that Applicant's independent claim 31, and the claims dependent therefrom, are *prima facie* patentably distinguishable over the cited reference.

The Examiner's Action has also relied on various other references in rejecting various ones of the original dependent claims. However, it is noted that none of these secondary references overcome the above-noted deficiencies of *Baba*. As such, it is submitted that Applicant's independent claims, and the claims dependent therefrom, are in *prima facie* condition for allowance. Such action, and the passing of this case to issue are requested.

Should the Examiner feel that a further conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Should any fee be required, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 18-0002, and advise us accordingly.

Respectfully submitted,



April 13, 2006

Date

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